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Unedited transcript

Committee on the Peaceful Uses of Outer Space

435th Meeting
Tuesday, 3 June 1997, 3 p.m.
Vienna

Chairman: Mr. RAO (India)

The meeting was called to order at 3.10 p.m.

The CHAIRMAN: I now declare open the 435th meeting of the Committee on the Peaceful Uses of Outer Space.

I would like to inform the Committee that I have received *notes verbales* from the United Arab Emirates, in which it requests permission to attend the current session of COPUOS as observer. I therefore suggest that, in conformity with past practice, we invite that delegation to attend the current session and to address the Committee as appropriate. This is without prejudice to further requests of this nature and does not involve any decision by the Committee concerning status. It is a courtesy we customarily extend to delegations. If I hear no objections, we shall proceed accordingly.

It is so decided.

This afternoon we will continue our debate under item 5 of the agenda, "General exchange of views". As I announced this morning, we will continue our general debate this afternoon and tomorrow morning. Once the list of speakers for item 5 has been exhausted, and time permitting, it is my intention to begin our consideration of agenda item 6, "Ways and means of maintaining outer space for peaceful purposes". I therefore urge all delegations wishing to speak on agenda item 6 to inscribe their names on the list of speakers as soon as possible.

Tomorrow morning, while keeping item 6 open, we will begin our consideration of agenda item 7, "Report of the Scientific and Technical Subcommittee on the work of its thirty-fourth session", and agenda item 9, "Implementation of the recommendations of UNISPACE 82". Following past practice in the Committee, these items will be considered jointly.

General exchange of views (cont.)

The CHAIRMAN: The first speaker on my list is the distinguished representative of Romania.

Mr. M. PISO (Romania): My delegation would like to renew our congratulations to you on your election as Chairman of the Committee; we also express our best wishes to Ambassador González and Professor Kabbaj. We are convinced that under the new leadership, much progress will be made in the Committee's efforts towards achieving greater international cooperation in the peaceful uses of outer space. Romania offers its full support to the new Bureau.

My delegation believes that cooperation in all aspects of space activities is indispensable for future progress if economic and social development is to be achieved. This year marks two anniversaries: it is 40 years since the first satellite, Sputnik-1, was launched, and 20 years since the beginning of the Voyager-1 mission, which is still operational in observing the Earth's solar system. These outstanding missions represent almost half a century of the space era, and would not have been possible without the contributions from all of mankind.

Many benefits have derived from the space area, and my delegation would like to recall those which have had a particular influence on humanity as a whole. The low-orbit satellite communications systems, the Global Positioning Systems and multi-spectral Earth observation from space provide a sound technical information base, in particular as concerns the so-called "global village". Space activities have offered a new means for international cooperation which contributes to the improvement of global security. Space programmes necessarily involve a variety of elements and a broad spectrum and level of qualification, thus enabling developing countries to have access to their applications,

as well as to the scientific and technological aspects of their mission.

Support for developments in the area of space and its applications should therefore be a priority on the agendas of all States and governments. Not all States are able to support the long-term research and development investment necessary to ensure basic access to space benefits. A recent comparative study conducted by the Romanian Space Agency found that public expenditure in this domain varied considerably among States. For example, in 1995-1996, the value attributable to the global space market was $46 billion: 71 per cent in the United States, 24 per cent in Europe and less than 5 per cent in other countries. Global funding for research and development activities, including launches, is $35.2 billion, i.e. $5.96 per capita. Expenditure in the industrialized countries ranges from $5 to $98 per capita, but in the developing countries average per capita expenditure is only $0.61.

Due to the increase in the labour:hardware ratio costs, it should be noted that the contribution of the individual becomes more important compared to the decrease in the costs of new technologies. Greater attention should also be paid to developing training and educational facilities.

Romania continues its efforts to achieve the development of regional, national and global cooperation, not only in the area of space applications but also as concerns research and education. An essential prerequisite for successful space technology applications is the improvement of indigenous capacities within each region, particularly human resources. Capacity building is therefore a priority area, and Romania is cooperating in the development of the recently established Network of Space Science and Technology Education and Research Institutions in Central Eastern and South Eastern Europe, in which most countries of the region participate. We hope the Network will promote full integration of the potential of the respective countries as regards the peaceful uses of outer space. In cooperation with other major organizations, such as the European Space Agency, we hope to strengthen the technological development and harmony of the region.

Romania continues to support the development of Earth observation technologies by satellites, as this represents an effective means to improve the quality of life and to provide a warning system for impending natural disasters. The development of small satellites equipped with remote sensing capabilities can greatly assist all regions in this respect. In 1996 the Romanian Space Agency began a project involving the mission of a small satellite with operational Earth observation facilities for regional monitoring and training.

Romania expresses its firm belief in the essential role played by the United Nations system in assisting the work of COPUOS. The mechanisms developed by the Committee at the regional, national and international levels will enhance future possibilities for cooperation, and contribute to the common effort towards benefit for all of humanity.

The CHAIRMAN: Thank you for your interesting statement, and also for your best wishes expressed to the new Bureau. The next speaker on my list is the distinguished representative of the Russian Federation.

Mr. E. ZVEDRE (Russian Federation) *(interpretation from Russian)*: I would like to state my delegation's position as concerns the main agenda items to be discussed. More detailed reports on the respective issues will be given by my delegation when the Committee considers the agenda items individually.

The thirty-fourth session of the Scientific and Technical Subcommittee was one of the most productive of recent times. Among its successes were the conclusion of work on the first and second parts of the special technical report of the Subcommittee on space debris. The delegation of the Russian Federation made specific proposals on further refinement of work on the report during the inter-sessional period, which are reflected in the Subcommittee's report. All delegations are urged to support these proposals.

The most important result of the session was the adoption of the provisional agenda for UNISPACE III. The document is comprehensive, balanced and pragmatic, and covers all aspects of cooperation in space. My delegation calls upon members of the Committee to adopt that agenda and to approve the organizational issues for the holding of the Conference which were agreed during the Subcommittee's session. My delegation also welcomes the Subcommittee's decision not to revise, at this stage, the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

The major achievement of the thirty-sixth session of the Legal Subcommittee was the decision to adopt a recommendation for inclusion of a new item on review of the status of the five international treaties governing outer space on its agenda. My delegation supports this decision, on the basis of the conditions set out in the Subcommittee's reports, and we believe the General

Assembly should recommend inclusion of this item on the Subcommittee's agenda. It is also necessary to continue seeking other new agenda items for possible inclusion on the Subcommittee's agenda, and to examine the norms of international law which might lead to formulation of new norms of a universal nature to help develop and strengthen the legal basis of activities in space in the next millennium.

Discussion on the geostationary orbit was at times quite dramatic in nature. My delegation does not agree that this topic should be taken away from the umbrella of COPUOS and handed over in its entirety to the International Telecommunication Union (ITU). Therefore, we are ready to continue work based on the proposals put forward by Germany and Colombia. The Russian Federation has set out its views on this subject in the document prepared during the Subcommittee's session.

Thanks to the introduction of the questionnaire on aerospace objects, work on the problem of the delimitation of space, outer space and air space has taken on a new impetus. My delegation appeals to all States that have not yet done so to reply to the questionnaire as soon as possible, in order to facilitate the task of preparing an analytical document on this subject for consideration by the next session of the Legal Subcommittee.

At the last session of COPUOS, in the context of a discussion on ways and means of maintaining outer space for peaceful purposes, my delegation proposed that Member States be requested to give their specific views on this problem, and volunteered suggestions for possible questions which might be asked. We would be grateful to receive comments from other delegations on this suggestion. As concerns spin-off benefits of space technologies, my delegation accords much priority to this topic and will provide a detailed report on this subject during the session.

This year marks the fortieth anniversary of the first satellite launch, an anniversary which will be broadly celebrated by the space community. This marked a new stage in both the development of space exploration and a stage in the broad practical use of space for the benefit of mankind.

Russia's federal space programme is extensive and covers many different fields. A detailed report on these activities will be available by the end of 1997. In my statement I would like to address those issues which are of major importance as regards international cooperation.

Russia's space programme continues to function steadily; the number of launches this year is much the same as in 1996, some 29 or 30, including both commercial and federal launches. The orbit unit which services the various segments of the space programme continues to receive support. Russia has successfully implemented the programme of manned space flights on board the Russian space station Mir, which now represents the front line of international cooperation in space. Over an 11-year period of Mir's operation, it has been visited by more than 80 cosmonauts and astronauts from all over the world. There is at present an international crew on board, comprising two Russian cosmonauts and one American astronaut.

In the context of the Russia/USA programme Mir-NASA, the American astronaut Jerry Leninger changed places on board Mir with Michael Roll during the flight of STS-84 in May 1997. The crew on board the Atlantic space shuttle included the Russian female cosmonaut Eliena Kondakova.

The Mir station is both an operational laboratory acting under conditions of an experiment where new technologies are being developed, as well as the principles for the construction and functioning of complex systems and models of optimum behaviour for the human operator. Certain non-conventional situations which have developed on board Mir during 1997, and which have been successfully dealt with by the crews and ground services, can provide invaluable experience which is vital to ensure the safety of the future International Space Station.

With respect to the International Space Station, partners involved in its creation and future operation have now completed work on the intergovernmental agreement relating to it, and have established the timetable and plan for its assembly in orbit. They have also confirmed their intention to deploy the station next year. The texts of this agreement are in the final stages of preparation, and we hope it will be signed by Heads of State in the near future.

Foreign satellites continue to be launched using Proton rockets. One week ago, the American Telstar satellite was launched from the Baikonur launch site. In the foreseeable future we hope to implement the launch of satellites under the Iridium project. Major events have taken place within the C-START programme, and we have completed the establishment of an international credit line for financing the Russian contribution of work on this project. There is every reason to believe that we

will shortly begin launches from a platform floating in the ocean.

The joint Franco-Russian enterprise Starcem is working successfully, and preparations are under way for launches under the GlobalStar programme. Intensive negotiations are taking place for commercial use of the converted SS-18 rockets and the Cosmos launcher rocket, and in the near future we plan to launch an American F-SAT satellite on this type of rocket. Recently an important event took place in Russia's space sector: with the launching of a C-START rocket we commissioned the new Svobodny launch site in the Far East.

One of the most profitable markets for space services is that for space communications systems. Under the European Organisation for Satellite Communications Programme, a Russian enterprise for applied mechanics, together with the Alcatel firm, is developing the C-SAT satellite. There are also various international projects in the field of remote sensing. Russia is actively developing cooperation with other countries for scientific research in space, and our delegation provided detailed information on this topic at the thirty-fourth session of the Scientific and Technical Subcommittee.

The CHAIRMAN: Thank you for your statement and for your best wishes extended to the Bureau. I now give the floor to the distinguished representative of China.

Mr. CHEN SHIQIU (China) *(interpretation from Chinese)*: On behalf of my delegation I would like to pay tribute to the outgoing Chairman, Ambassador Hohenfellner. During his chairmanship, COPUOS has achieved great progress and results in fulfilling the mandate entrusted to it by the General Assembly. We greatly appreciate the experience, patience and skill he has demonstrated during the inter-sessional informal consultations, which have played a crucial role in the reform process of the Committee.

My delegation would also like to extend its congratulations to the newly elected members of the Bureau; we are confident that under your leadership and through the joint cooperation of all delegations, COPUOS will achieve further progress in the peaceful uses of outer space as well as international cooperation.

My delegation is pleased to note that the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interests of all States, taking into Particular Account the Needs of Developing Countries, which was drafted by this Committee, was adopted by the General Assembly at its fifty-first session. This is an important accomplishment. My delegation would like to express its congratulations and thanks to the sponsoring States, as well as to the chairman of the working group on this subject. We hope that all countries, particularly space-faring developed nations, will promote and intensify international cooperation in accordance with the principles of the Declaration.

The Chinese Government strongly supports all efforts aimed at the peaceful uses of outer space, and advocates the enhancement of international cooperation. China has concluded intergovernmental agreements with many countries; the China National Space Organization has signed cooperation agreements with its counterparts in several countries. Our space community has conducted positive bilateral and multilateral work in the area of satellite manufacture, launches, manned space flights, and the application of space technologies.

China attaches equal importance to cooperation with developing countries, and in this connection I would like to mention that the work on the China-Brazil Earth resources satellite, EBRS, is making smooth progress, with successful completion anticipated by the end of this year. Regional multilateral cooperation involving small multi-mission satellites, through collaboration with China, Pakistan, Republic of Korea and Thailand, has also achieved substantive progress. The Government of China plans to expand space cooperation with all countries to ensure that space technology brings more benefits to mankind.

After 40 years of hard work, China has achieved great progress in its space programmes and has set up an integrated system of research design, trial manufacture and production, and experiments. Well-equipped launch centres have been constructed which are capable of launching a variety of satellites. The series of launch vehicles successfully developed by China can launch satellites to the near Earth orbit, the solar synchronous orbit and the geostationary orbit. Different types of satellites are widely used in the economic, scientific, cultural, and national defence areas, with beneficial socio-economic effects.

China is well advanced in certain areas of space technology, such as satellite recovery, multi-satellite launching on a single mission, launching and monitoring of geostationary orbit satellites, etc. In order to promote sustainable development, the Chinese Government has

incorporated space technology into the national development strategy.

Since the last session of COPUOS, China has carried out several successful launches. The DFH-3 communication satellite, launched on 11 May 1997, has been successfully positioned at 125° East longitude of the geosynchronous orbit. This is a new generation of broadcasting communication satellites developed by China, with 24 transponders – six times as many as were carried by DFH-2. In the near future China will launch the first generation of geostationary orbit meteorological satellites, FY-2. Many of China's neighbouring countries will be able to share the information generated by this satellite.

My delegation has noted with interest the report of the Scientific and Technical Subcommittee on the work of its thirty-fourth session, and the report of the Legal Subcommittee on its thirty-sixth session. We are pleased at the progress and results achieved by both Subcommittees, and we have further comments to make on both reports under the appropriate agenda items.

An important agenda item for this session is consideration of preparations for UNISPACE III. My delegation notes with appreciation that the Scientific and Technical Subcommittee has already assumed the function of Advisory Committee for UNISPACE III and made recommendations concerning the objectives, form, venue, date, participation, provisional agenda and additional components of the Conference. We feel that the basic objective of UNISPACE III should be the promotion of the effective use of space technology to assist in solving problems of regional or global significance, and to strengthen the capabilities of Member States, in particular the developing countries, to use space applications to promote economic, social and cultural development.

In order to achieve these objectives, the widest possible participation of Member States, especially developing countries, in the preparations for the Conference is indispensable. The recommendations and action plans to be adopted should include practical measures which will translate the objectives of the Conference into reality, in particular measures to promote the application of space technology in developing countries. The capability of these countries to develop space technology on their own strength is also a vital objective which is the key to the success of UNISPACE III.

The methods of work of the Committee has become an issue of concern to Member States. The results of the inter-sessional informal consultations which were held to address this issue included the Chairman's package proposal on the composition of the Bureau, structure of the agenda and duration of sessions. My delegation supports all reform measures which will improve the methods of work and welcomes the Chairman's package proposal, adopted by consensus, which should be formally adopted at this session of the Committee. It is important to strengthen the role of COPUOS and improve the efficiency of its work. My delegation hopes that COPUOS will emerge from this reform process with renewed vitality with which to meet the challenges of the twenty-first century, solve new problems which lay before it, and make greater contributions to the cause of mankind in the peaceful uses of outer space.

In conclusion, my delegation would like to thank the Secretariat, headed by Dr. Jasentuliyana, whose excellent work has laid the foundation for the smooth functioning of the session. Their efforts and the achievements of COPUOS are inseparable.

The CHAIRMAN: Thank you for your informative statement and your kind words addressed to the new Bureau. I now give the floor to the distinguished representative of Indonesia.

Mr. M. SUMARYO (Indonesia): My delegation would like to associate itself with previous speakers who have expressed their sincere congratulations to you on your election as Chairman of this Committee. We are confident that under your able guidance and with your wealth of experience we will achieve a successful conclusion to our deliberations. We also congratulate Ambassador González and Professor Kabbaj, and assure the Bureau of our full cooperation for the responsible work which lies ahead.

My delegation would also like to pay tribute to Ambassador Hohenfellner, for the remarkable work he has done in the Committee.

My delegation has listened with interest to your statement reviewing the work of the Committee during its last session, as well as the work programme for the current session. We attach great importance to the work of COPUOS and its two Subcommittees and continue to support the Committee's role in maintaining outer space for peaceful purposes. We emphasize the need for continuing efforts to promote international cooperation

in the peaceful uses of outer space, with particular attention to the needs of the developing countries.

My delegation recognizes the competence of the Conference on Disarmament in addressing issues pertain to prevention of an arms race in outer space, but believes that this Committee should complement the work undertaken by that body. Indonesia would like COPUOS to be kept fully informed of the work of the Conference on Disarmament, and to see greater coordination established between the two.

Cooperation among nations in space activities should be promoted and developing countries should have equal access to the benefits of space technology. Paramount importance is therefore attached to the holding of workshops, seminars and training courses under the auspices of the United Nations Programme on Space Applications in order to assist the developing countries to master, develop and use space technology in a national context.

As concerns inter-agency cooperation and the coordination of space activities in the United Nations system, my delegation believes that the United Nations should play a pivotal role and should act as a coordinator in establishing guidelines to implement various bilateral, regional and international programmes. The recommendations of UNISPACE 82 are vital in this respect, and it is regrettable that those recommendations were not fully implemented. My delegation appreciates the efforts of the Working Group of the Whole to examine ways of promoting the implementation of these recommendations.

With regard to remote sensing and the use of nuclear power sources in outer space, my delegation is pleased to note that these remain priority items on the agenda of the Scientific and Technical Subcommittee. Remote sensing of the Earth by satellites is vital to all countries, especially the developing countries. In order to gain maximum benefit in the area of data acquisition and data processing, Indonesia stresses that the compatibility and complementarity of existing and future remote sensing satellites should be maintained.

My delegation conveys special thanks to the Governments of Japan and the United States for enabling many countries to acquire important data from the GMS and NOAA satellites free of charge, and hopes that both countries will continue to operate similar satellites in the future. We also urge other developed countries to build and operate satellites which are complementary to GMS and NOAA and thus provide increasing access to important data.

Indonesia welcomes the adoption of the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, taking into Particular Account the Needs of Developing Countries by the General Assembly in its resolution 51/123. In our view, the Declaration constitutes a milestone in our efforts in the area of outer space benefits, and we hope it will pave the way for the promotion of greater international cooperation. Indonesia has ratified the Liability Convention and the Registration Convention.

Concerning the geostationary orbit, my delegation welcomes the constructive discussions which took place based on the working papers submitted by Colombia and Germany. Indonesia believes that COPUOS is the competent body in the United Nations family to address the political and legal aspects of the use of the geostationary orbit, while the ITU, in accordance with its mandate, should address the technical aspects of the orbit's use. Along with other equatorial States, we have constantly emphasized the need for negotiations on this important issue, especially as regards the establishment of a *sui generis* regime for the GSO. My delegation hopes this item will be maintained on the agenda of both this Committee and its Subcommittees until such a regime has been established.

The Committee has already made good progress in preparing for UNISPACE III, and Indonesia supports the recommendations of the Scientific and Technical Subcommittee to hold the Conference in 1999. We are ready to participate actively in the Conference and its preparatory work.

I would like to outline Indonesia's space activities and its regional and international cooperation projects. As a developing country, Indonesia has long recognized the tangible benefits deriving from space activities to help advance its national development programmes. Despite its limited means, Indonesia has utilized space technology to establish its own domestic satellite telecommunications systems, television broadcasting and ground station operations concerning remote sensing for environmental protection, meteorology and natural resource mapping.

Indonesia has continued to collaborate in cooperation programmes with other countries. Along with those countries in the ESCAP region, Indonesia shares a common interest in fostering cooperation as a

necessary precondition for ensuring national development. Our commitment towards such development was reflected in our participation in activities under the Regional Space Applications Programme for Sustainable Development in Asia and the Pacific (RESAP). The Satellite Imagery Interpretation Education Centre of the University of [Gadjah Mada?], along with the National Coordination Agency for Survey and Mapping, hosted the Medium-Term Training Course on Sustainable Land Use Planning in Yogyakarta, Central Java, in October/December 1996. The Indonesian Government funded the course, which was attended among others by 16 participants from 14 countries in the region, and a similar course is scheduled to be held in Yogyakarta in the second half of 1997.

Indonesia hosted the Second Meeting of the Regional Working Group on Satellite Communication Applications in Bali in March 1997. Indonesian officials and experts have participated in the various meetings and activities of RESAP, including: the High-level Seminar on Integrated Uses of Space Applications for Poverty Alleviation and Rural Development (Bangkok, October 1996); in collaboration with the consultancy team of the ESCAP Secretariat, harmonization of initiatives to promote regional cooperation on space technology applications for sustainable development in Asia and the Pacific (Jakarta, November 1996); the first and second dialogue meetings on Policies concerning Harmonization of Various Initiatives for Promoting Regional Cooperation in Space Technology Development and Applications in the Asia-Pacific Region (Beijing, January 1997, and Bangalore, March/April 1997); the Regional Group Meeting on Space Science and Technology Applications (Singapore, February 19976); and many others.

Indonesia has made significant contributions to both regional and international space applications programmes, and hosted the International Workshop on Climate Change National Action Plans in Bogor, West Java, in January 1997. In cooperation with WMO it hosted the First International Workshop on Monsoon Studies in Bali in February of this year. Indonesia gives its full support to the establishment of the data processing and analysis centre for GPS-geodetic infrastructure in the Asia and pacific region and is willing to host the centre. Joint activities will continue in the area of EC-ASEAN projects, including GPS geodetic applications, regional geodynamic studies from GPD observation, and remote sensing applications.

In cooperation with DRM (France), Indonesia has been conducting research on monitoring volcanoes in Eastern Indonesia, using NOAA-ARGOS data. A study has been conducted in collaboration with JAPEX Geoscience Institute, Japan, on geological remote sensing of the South Sumatera Basin, using Landsat TM, SPOT and radar JERS-1 data. Indonesia participates in activities of the SARCS-STAR/IGBP Asia-Pacific Network on Global Change Research (APN), and will continue its participation in Australia-ASEAN joint activities.

With regard to satellite communication applications, India took part in the study visit on satellite and radio frequency management which was made by the delegation of Viet Nam to facilities owned by Indonesia in January 1997. It also hosted the Multilateral Satellite Coordination Meeting on L-band, held in jakarta in December 1996. An Indonesian satellite operator, PT Pacific Satellite Nusantara, participated in the conduct of an ACES project whose aim is to develop satellite cellular systems using geostationary mobile satellite services.

Indonesia has other programmes on the horizon in the field of space technology and its applications, and our programmes will focus on space applications to meet national needs. It will increase its efforts to develop space technology in order to strive to achieve self-sustaining capabilities in the area of space activities. In cooperation with DASA (Germany) and the Hughes Corporation (United States), Indonesia is in the process of developing its own Aeronautical Navigation Satellite System (ANSS), scheduled for launch in the first decade of the twenty-first century. ANSS will service all of Indonesia and a small part of the Asia and Pacific region. The establishment and operation of a spaceport on its own territory is another objective of Indonesia which it hopes to put into operation in the near future.

My delegation hopes to see COPUOS consolidate and strengthen its efforts to assert its leadership in the promotion of international cooperation to preserve outer space as the common heritage of all mankind.

The CHAIRMAN: Thank you for your detailed report on Indonesia's space activities, as well as your kind words addressed to the members of the Bureau. The next speaker on my list is the distinguished representative of Hungary.

Mr. I. ALMAR (Hungary): My delegation would like to congratulate the new members of the Bureau on your election. We are convinced that under your experienced leadership our Committee will continue to fulfil its important task. My delegation also wishes to express its appreciation to the outgoing Bureau of the

Committee, whose dedicated and professional work will not be forgotten.

My delegation would like to briefly inform the Committee of Hungary's main space activities since the meeting of COPUOS in June 1996. In accordance with the long-term aims of Hungary's space policy, the most significant international cooperation has been conducted with ESA. We are now preparing the prolongation of the general agreement between ESA and Hungary, and negotiations are continuing with a view to Hungary joining the ESA scientific experiment development programme (Prodex).

After several decades of successful cooperation, Hungary has proposed the conclusion of an agreement between its space organization and that of the Space Research Institute of the Polish Academy of Sciences. In Warsaw in May 1997, the representatives of the Polish Academy of Sciences and the Hungarian Space Office signed the general agreement on cooperation in the field of space activities. My delegation hopes that this milestone in Polish/Hungarian collaboration will strengthen and broaden the joint activities of the two countries. Hungary is also contemplating the preparation of similar agreements with space research organizations of other former Member States of Intercosmos.

It was a great honour for Hungary that the EURISY Association held its latest colloquium on "Earth Observation and the Environment: Benefits for Central and Eastern European Countries". The colloquium was a great success and several experts from Central and Eastern Europe as well as representatives of international organizations participated. As well as providing a forum for the exchange of ideas, it provided an excellent opportunity to establish new contacts for future cooperation.

Six years ago, Hungary realized that its space activities must be carried out in cooperation with other partners at the international level. The projects which have been put in place since then demonstrate that this has become a reality.

In the field of remote sensing, Hungary continues to participate in the CORINE [COPINE?] land cover project and in ERS data-processing work. Hungary is involved in the Cluster Science Data System, will take part in the Cluster replacement project, and will participate in the scientific work of the SOHO heliophysical space probe.

NASA accepted Hungary's participation in the NASA-Mir programme with the latest version of the Pille dosimeter, which was put into orbit by the space shuttle Atlantis in January 1997. Hungary is an active partner in the CESAR project in the framework of the Central European Initiative, and it is hoped that the CESAR satellite will be launched later this decade with four Hungarian scientific instruments on board.

Hungary has constructed ground support equipment for the Cassini space probe towards Saturn, which will be launched this autumn, and is involved in the Russian astrophysical mission Spectrum-X-Gamma.

Prospective future activities include participation in various international space projects. ESA, NASA and RSA have agreed that Hungary will contribute to the International Space Station with a dosimetric system based on the Pille dosimeter, and Japan has also indicated its readiness to cooperate with us in this field. NASA and the Hungarian Space Office have signed a contract on the Hungarian Universal Multizone Cristallizator for the International Space Station as part of the material sciences experiment block. Hungary is also involved in the ESA Rosetta cometary research mission, which will be launched in the next century.

The CHAIRMAN: Thank you for your interesting statement and the kind words addressed to the Bureau. I now give the floor to the distinguished representative of Canada.

Mr. S. LESSARD (Canada): In line with the desirable practice of keeping opening statements as brief as possible, my delegation would like to highlight the most recent space-related events of significance in Canada, and put forward a Canadian perspective on some major issues to be considered during this session by COPUOS.

One of the most significant events of this year has been Canada's decision to manufacture the device known as the Special Purpose Dextrous Manipulator. The device will be a key component of the Mobile Servicing System, Canada's contribution to the International Space Station, and will allow for the use of the world's most advanced space robotics technology to support the assembly, maintenance and operation of the Space Station. This announcement, which was made by Prime Minister Chrétien in Washington on 18 April 1997 during a joint press conference with President Clinton, reaffirms Canada's commitment as a full partner, along with Europe, the United States, Japan and Russia, in this

largest and most complex international science and technology project ever.

Over a year after the formal start-up of its operations, Canada's RADARSAT I remote sensing satellite continues to provide users around the world with important data, which enables such key activities as natural resource management, disaster prevention and mitigation, environmental monitoring, survey of ice movements and maritime traffic, urban planning and land use mapping. It has also proved useful in support of various peace-keeping and peace-building activities such as those carried out under the auspices of the United Nations during the humanitarian crisis in the Great Lakes region of Central Africa.

The above applications and many more were demonstrated by user organizations from all over the world at the conference on "Geomatics in the Era of RADARSAT", which was held in Ottawa last week and was a great success. My Government would like to thank all nations who contributed experts and shared their experiences.

Turning now to some of the issues before the Committee, Canada joins with other countries in welcoming the adoption yesterday of the Chairman's package proposal which was so ably developed under the stewardship of Ambassador Hohenfellner. The measures contained therein are significant not only because they will improve the representative character of the Bureau and the efficiency of our methods of work, but also because having been adopted by consensus, they underline the continuing resolve of all members to ensure the central role to be played by this Committee in the future in global space matters. My delegation believes that more work can and must be done concerning the working methods and agenda, and looks forward to further discussions on these issues.

Canada is also pleased to see the progress achieved at the last session of the Scientific and Technical Subcommittee towards developing an efficient and balanced agenda and workplan for UNISPACE III. We believe that the Conference will provide a timely opportunity for the world community to exchange information and experiences on the useful applications of space technologies and systems for sustainable development in all region, and will enhance international cooperation.

My delegation plans to make specific statements on matters pertaining to the reports of the two Sub-committees, as well as on the issue of spin-offs, to which we attach great importance. We support the adoption of the draft resolution on ensuring equitable access to the geostationary orbit submitted by Germany at the last meeting of the Legal Subcommittee. Adoption of this text would represent the substantial conclusion of the Legal Committee's work on this item, and we would support deletion of this item from the Subcommittee's agenda. If this view is not a consensus one, my delegation would like to see suggestions for specific and achievable objectives for continuing discussions and a concrete workplan.

Under the leadership of the Canadian Space Agency, Canada has begun to plan the development of its Third Long-Term Space Plan, implementation of which is expected to commence next year. As has been the case since the inception of the Canadian Space Program, this plan will be based on international cooperation. My delegation would be delighted to discuss any ideas from other Committee members for possible future cooperation, either during this session or at a later date.

My delegation adds its voice to that of so many others in welcoming you, Ambassador González and Professor Kabbaj to the Bureau of this Committee; in conveying our warmest appreciation to Ambassador Hohenfellner for his outstanding contributions to the work of this Committee for so many years; and also to thank the Secretariat for their continuing excellent work.

The CHAIRMAN: Thank you for your statement and your warm welcome extended to the new members of the Bureau. The next speaker on my list is the distinguished representative of Iran.

Mr. F. JAHEDI (Islamic Republic of Iran): My delegations welcomes your election to the chairmanship of this Committee. You are known to us all as an eminent scientist and a diplomat of high repute. My delegation is confident that in this crucial period of reform of COPUOS, under your guidance and leadership significant progress will be achieved in the benefits of space technology and its applications, especially for the developing countries. Our congratulations also go to Ambassador González and Professor Kabbaj on their election to the Bureau.

My delegation reaffirms its appreciation for the work carried out by the outgoing Bureau. It is our hope that changes in terms of equitable geographical distribution and rotation, the inclusion of new items on the agenda, and revised working methods will pave the way for further efficiency and productivity in the Committee's work. This will lead to the practical

participation of all countries, irrespective of varying levels of space capabilities which exist, and serve the interests of all nations.

My delegation believes that the opportunities now available through the use of space and its applications will allow the goals of the peaceful uses of space technologies to be more easily pursued. These include communications, data transmission, resource exploration, protection and monitoring of the environment, tele-education, tele-medicine, weather forecasting, and broadcasting of radio and television programmes. Such benefits are not only vital to the sustainable development of all nations, but in themselves provide an effective tool for regional and international cooperation.

A decision has recently been taken in my country to integrate all space-related national organizations in the "National Consultative Committee for Space Activities". This Committee will act as a supervisory body in the policy-making area, directing individual programmes towards the objectives of sound and sustainable development, preparation of necessary regulations, and the modification and revision of existing legal documents with a view to establishing regional and international cooperation programmes and projects.

In order to fulfil these objectives, all national space-related activities are divided into four main categories: remote sensing, GIS and satellite-based position systems; meteorological satellite applications and national hazard monitoring; satellite communication applications; and space science and technology.

The convening of UNISPACE III in 1999 will provide a unique opportunity to consolidate the motivation of the international community to enhance multilateral cooperation in the field of space-related activities. At this session, COPUOS should play its role as the Preparatory Committee for the Conference, the task entrusted to it by the General Assembly. The Scientific and Technical Subcommittee has discussed various aspects relating to UNISPACE III and has made recommendations concerning its objective, venue, provisional annotated agenda, participants and additional components. The proposed agenda item 7(d), "Promotion of international cooperation", is the key item on the provisional agenda: existing and new mechanisms for international cooperation, as well as the current status of outer space law, should be reviewed.

It is my delegation's view that the conclusions of the Conference should allow developing countries to improve their space-related activities. The Conference should discuss ways and means of bridging the gap between the developed and developing countries in the utilization of space. It goes without saying that involvement of States at the global level in outer space activities is the best way to maintain the use of outer space for peaceful purposes, and could help prevent a possible arms race in space. Developing countries should not be denied access to space benefits but should have equitable access to all matters pertaining to space. These important issues must be addressed by the Conference, and its plan of action should provide appropriate guidance to the international community.

The United Nations Programme on Space Applications can play a central role in bringing the many practical benefits of space science and technology to developing countries on a non-discriminatory basis. The work of the Programme should help strengthen the capabilities of the developing countries to find solutions to long-standing problems.

The tremendous changes which have taken place in recent years necessitate the development of legal instruments to ensure the maximum utilization of space for the benefit of both present and future generations. My delegations continues to be concerned about the space environment, and in particular the question of space debris. While welcoming the progress made in the Scientific and Technical Subcommittee as the result of the multi-year plan to discuss the issue of space debris, we nevertheless believe that the Legal Subcommittee should begin to give serious consideration to an appropriate legal regime.

In conclusion, my delegation associates itself with the Group of 77 in urging that new items be added to the agenda of the Legal Subcommittee. While the new item on "Review of the status of the five international treaties governing outer space" is a step in the right direction, further substantive items are necessary. The delicate issue of the geostationary orbit should be maintained on the agenda of the Legal Subcommittee and be addressed in a positive and constructive manner.

The CHAIRMAN: Thank you for your excellent statement and for the kind words addressed to me and to my colleagues in the Bureau. I now give the floor to the distinguished representative of Morocco.

Ms. S. OTMANI (Morocco) (*interpretation from French*): As a result of the series of meetings and informal consultations that took place following last year's session of COPUOS, under the able guidance of the Chairman, the Committee now has a new Bureau

which will reflect a new international reality based on equitable geographic distribution. My delegation would like to congratulate the new members of the Bureau on their election and assure them of our full support.

I would like to take this opportunity to thank the Member States of the African Group for the full support given to Morocco's candidature for the post of Vice-Chairman/Rapporteur.

Various training activities undertaken, the creation of the CREST project and the contribution of the COPINE project all demonstrate the commitment of Morocco to the promotion of regional and international cooperation in the field of outer space. In line with the statement made by the Chairman of the Group of 77 and China, my delegation also wishes to recall the positive role played by the members of the outgoing Bureau, and the major contributions made towards maintaining the peaceful uses of outer space.I would therefore like to take this opportunity to pay a resounding tribute to its members for their commitment, and especially to Ambassador Hohenfellner, for his dedication, ability and professionalism which have led him to perform his work within COPUOS in so outstanding a manner, promoting efficiency of its working methods and institutional stability, as well as the renewal of trust among Member States.

The scope and importance of space technology and its application are growing as each day goes by, and will henceforth become a part of our society. All of mankind, and the developing countries in particular, can benefit from space technology for their economic, social and cultural development. However, it is still necessary to lend strong support to all international initiatives to promote cooperation, and to strengthen capacities at the national level in order to become involved in space activities as concerns priority areas, such as health, education, natural resources, etc. These are all particularly vital elements for the African continent, which faces problems of desertification, drought and other scourges.

The second United Nations Regional Conference on Space Techniques for Sustainable Development in Africa, held in Pretoria in February 1996, adopted a memorandum on these issues of priority concern to Africa. This allowed my delegation the opportunity to take official note of the efforts made by the Office for Outer Space Affairs to promote science and technology in the African continent, and to ensure the application of those actions as set out in the memorandum. Urgent measures are necessary if Africa is able to take its place in the world in the twenty-first century. We also feel that the celebration of an International Space Day, with all its inherent activities related to space, is something which would greatly contribute to the promotion and development of space technology and its applications.

My delegation expresses the hope that the holding of UNISPACE III will encourage the promotion of more effective regional and international cooperation. We must do our utmost to ensure that with the approach of the third millennium, space takes its place and plays a major role. In this respect there should perhaps be a "Committee of Honour", or something similar, of very high-level people in the political and scientific world. To that end, we feel it is important to organize the necessary regional preparatory meetings for UNISPACE III in order to make sure that all regions play their part in the strengthening of multilateral cooperation in outer space activities.

The CHAIRMAN: Thank you for your interesting statement. I now give the floor to the distinguished representative of South Africa.

Mr. J. DAVIES (South Africa): I would like to begin by congratulating you on your election to the post of Chairperson of this Committee. I would also like to congratulate the Ambassador González, and also the Vice-Chairmen of the two Subcommittee. I would like to say a special word of congratulation to Professor Kabbaj of Morocco, the Rapporteur. This is the first time in the long history of COPUOS that a representative of Africa is serving as a member of the Bureau. We regard this as a demonstration of an enhanced interest by the African countries in the work of the Committee. This major step forward is a great achievement, and my delegation would like to congratulate Ambassador Hohenfellner on his skillful and selfless negotiations on the new working methods. In the same way that this new composition of the Bureau represents a break with the past, and the cold war conditions under which the previous Bureau structure was determined, we hope it will also provide a fresh impetus to be given to a number of priority areas in the work of the Committee.

South Africa is a relative newcomer to COPUOS, and my delegation was initially surprised by the somewhat slow movement on certain agenda items. Although important progress has been made in some areas, we hope that under the leadership of the new Bureau, and in view of the lead-up to UNISPACE III, members of the Committee will be able to breathe fresh life into other important areas of work. I hasten to add that this observation in no way implies criticism of the

skills and talents of the former Bureau – far from it. We nevertheless view the change in membership of the Bureau as a fresh opportunity which may well provide an additional boost to the Committee's work.

There is much enthusiasm in South Africa as concerns the possibilities of the applications of space technology for sustainable development, and it was with pleasure that we hosted the Second United Nations Regional Conference on this topic last year. We hope to increase both our involvement and commitment to the work of COPUOS in this area. Our domestic legislation has now made provision for a Space Council, and as this new body becomes functional, we look forward to a greater level of support for the work of this important Committee.

The CHAIRMAN: Thank you for your statement and for your kind words of welcome to the new Bureau. I now give the floor to the representative of Nigeria.

Mr. R. BOROFFICE (Nigeria): My delegation congratulates you and the other members of the Bureau on your election to guide the work of this important Committee. Your assumption of this position has made the long-awaited review aimed at democratizing the work of COPUOS become a reality. Your capabilities, dedication and "track record" in the Committee are known by all; your contributions to the promotion of South-South cooperation and your leadership role in ISRO demonstrate the wisdom of your election to this post.

My delegation would like to mention the important role played in this Committee by its new Vice-Chairman, Ambassador González. His contributions and resolve during meetings of the Committee and its Subcommittees, in particular when contentious issues have been concerned, represent a considerable asset which can be fully realized in this new position. As an experienced professional in the field of space science and technology who has made such meaningful contributions to COPUOS, we also wish to congratulate Professor Kabbaj, Second Vice-Chairman/Rapporteur. We extend to Ambassador Hohenfellner our congratulations and thanks for his outstanding leadership over the past years, and we hope his wealth of experience will continue to be at the disposal of the Committee.

As concerns the implementation of Nigeria's space technology-related programmes, my delegation is pleased to report steady progress on the establishment of the United Nations Centre for Space Science and Technology Education for Anglophone African Countries. With the facilities in place at the Obafemi Awolowo University at Ile-Ife, and the positive replies received to date from participating countries, the Governing Board should meet in October 1997 to adopt the Common Denominator Agreement, and the inaugural academic programme could then begin in November 1997.

Under the auspices of the COPINE project, a national users forum has been established, and a national seminar will be held soon to sensitize potential users and policy-makers on the benefits of this project. As one of the Government's main thrusts to ensure the maximization of the spin-off benefits of space technology, efforts are being concentrated on capacity building. Some national universities now offer courses at the post-graduate level in areas such as meteorology, remote sensing and GIS.

The ECA Regional Centre for Aerospace Surveys (RECTAS), located at the Obafemi Awolowo University, Ile-Ife, also offers post-graduate diploma and other professional courses in remote sensing, photogrametery and cartography. These courses are bilingual and thus attract participation from both French- and English-speaking countries within and outside the West African subregion.

In the area of bilateral and multilateral cooperation, at the University of Nigeria, Nsukka, the programmes on both radio astronomy and basic space sciences have continued to be improved thanks to bilateral cooperation with other international institutions, notably from India. Since 1990, the Institute of Geosciences and Space Technology, established at the campus of the River State University of Technology, Port-Harcourt, has been involved in an on-going programme in the field of satellite geodesy and geodynamics research, with the benefit of some collaboration with NASA. Once operational, it aims to establish a permanent observation station in Nigeria as part of the global network for Very Long Baseline Interferometry (VLBI), the Cooperative International GPS Network (CIGNET) and the Global Sea Level Monitoring Absolute Gravity Network.

The Federal Department of Meteorological Services is boosting its networking and telecommunication facilities nation-wide, through technical assistance from the Government of China. It has now started daily weather forecasting and reporting as part of a national TV programme. The National Centre for Remote Sensing in Jos has become fully operational, and its facilities are being upgraded to enable it to meet

anticipated future challenges and goals. Details of these and other on-going programmes and planned activities have been submitted to the Secretariat.

My delegation would like to reiterate its readiness to give its full support to the new Bureau to ensure that the Committee's work is carried out as expeditiously as possible. We commend the work of the two Subcommittees, and in particular the decision to hold UNISPACE III, on which we plan to offer our views at the appropriate time.

The CHAIRMAN: Thank you for your informative statement, and for your warm words of welcome addressed to the members of the Bureau. I now give the floor to the distinguished representative of Brazil.

Mr. A.C. DE OURO-PRETO (Brazil): At a time when Brazil is handing over the post of Rapporteur after many years, my delegation would like to emphasize the importance it attaches to COPUOS and to its participation in this Committee. My delegation would like to congratulate the new members of the Bureau, wish them every success in their endeavours, and offer them the full support of Brazil.

Many significant conquests have been achieved by COPUOS in recent years, particularly as concerns space benefits, and many challenges await us in the future. Now is the time for all members to give thorough consideration to the future work and orientation of the Committee, all the more so since we have a new Bureau leading us. A profound revision is necessary of the substantive agenda of the subsidiary bodies, in particular the Legal Subcommittee. My delegation will present its specific comments on other agenda items at the appropriate time.

The CHAIRMAN: Thank you for your concise intervention and your warm welcome. I now give the floor to the representative of the Republic of Korea.

Mr. H.-J. LEE (Observer, Republic of Korea): My delegation wishes to join with previous speakers in extending our sincere congratulations to the new members of the Bureau. We are confident that under your leadership COPUOS will be guided to a constructive and productive future, and we are pleased to note that in future, election of officers will take place on a basis of rotation.

We have all witnessed the long and difficult process which culminated in the Chairman's package proposal, which contained three key elements as concerns the future of COPUOS: the new composition of the Bureau, restructuring of the agenda, and duration of sessions. All of these have now come into effect, and we pay tribute to Ambassador Hohenfellner for the superb effort made by him to find a common denominator among so many differing views. My delegation wishes him every success in the years to come.

The reform is not an end in itself, but a process towards a better future. COPUOS must therefore continue to aim at enhancing its efficiency and effectiveness. Cooperation and support from the space-faring nations is indispensable for the successful reform of the Committee. As one of the subsidiary bodies of the United Nations General Assembly, the further reform of COPUOS will be directly affected by the United Nations reform as a whole. However, its future lies in the hands of Member States, and we wish to state our views on certain issues, such as the rumoured relocation of COPUOS. My delegation supports the view that COPUOS should continue to be located in Vienna, for practical reasons, including to facilitate preparations for UNISPACE III.

With respect to membership, my delegation believes that the number of Member States of COPUOS should be increased so that all countries which have the will and potential to contribute to international cooperation towards the peaceful uses of outer space are included in its membership. It does not make sense to emphasize the importance of continuity of work, while leaving unresolved a basic distinction between permanent members and rotating members. My delegation feels that this distinction does more harm than good to the effective promotion of the objectives the Committee is pursuing, and we would suggest that this distinction be eliminated. At a time when the Chairman's package proposal has been adopted by consensus, the future orientation of the composition of the Committee should be decided on, and upgrading current rotating members to full membership should be carried out as early as possible.

Since 1993, the Republic of Korea has expressed its legitimate intention to become a full member of COPUOS, and offers good potential for the provision of regional and international cooperation in the field of outer space. With the KITSAT scientific satellite programme, Korea now has increased activities in the use of outer space and has launched two Korean telecommunication satellites in 1995 and 1996. My delegation has prepared two papers (which delegates will find at the entrance to the meeting room) giving more detailed information on space science research activities in the Republic of Korea.

COPUOS is a forum for substantive discussion on outer space issues, and therefore political compromise should be the last factor to determine the composition of its Member States. In conclusion, the Republic of Korea is ready to participate actively in the work of COPUOS, including the preparations for UNISPACE III. My delegation has more detailed comments to make under the relevant agenda items.

The CHAIRMAN: Thank you for your statement and for the warm words of welcome to the new Bureau. I now give the floor to the representative of ESCAP.

Mr. H. CHANGCHUI (Observer, Economic and Social Commission for Asia and the Pacific (ESCAP)): On behalf of ESCAP, I would like to express our warmest congratulations to you and your colleagues on your election to this high office in the Committee. With your broad experience and firm commitment to the tasks entrusted to you, we are sure you will lead the Committee towards many new accomplishments.

Space technology and its applications continue to develop rapidly in the Asian and Pacific region, as in many other parts of the world. As part of a collective regional effort towards the implementation of the recommendations of UNISPACE 82, ESCAP organized its first ever Ministerial Conference on Space Applications for Development in Asia and the Pacific in Beijing in September 1994. This Conference launched the Regional Space Applications Programme for Sustainable Development (RESAP) and adopted the Regional Strategy and Action Plan on Space Applications for Sustainable Development in Asia and the Pacific. The Strategy provides a general policy instrument for cooperation and coordination in space application at the national and regional levels and for the implementation of the RESAP. The Action Plan identifies national and regional activities to promote space technology applications for environmental management, disaster monitoring, poverty alleviation and sustainable development planning. RESAP acts as the vehicle for achieving the goals of both the Strategy and the Action Plan.

Since the Ministerial Conference took place, the ESCAP Secretariat has assumed a leading role in the implementation of its recommendations, in cooperation with a number of regional agencies and organizations. An action-oriented, step-by-step approach has been taken by the Secretariat to implement RESAP and progress has been quite significant.

Institutionally, the ESCAP Secretariat has reconstituted the Intergovernmental Consultative Committee for RESAP. This body, which now has a broader mandate, continues to provide policy and technical advice to the Secretariat concerning RESAP, covering four main areas: remote sensing, GIS and satellite positioning systems; meteorological satellite applications and disaster monitoring; satellite communication applications and distance education; and space sciences and technology applications. The ICC now has 30 national focal points of contact. At its annual session, it reviewed and identified activities of common interest as well as developing strategies for the implementation of RESAP. Four regional working groups have been established, each with a coordinating office located in the appropriate government agency; the national contact points (usually at Director General level) and coordinators of each working group constitute the core network. The working groups thus established have started to initiate regional cooperation activities with TCDC support. To date, eight regional working group meetings have been organized, identifying some 15 project areas for joint action.

In order to initiate operational activities, two expert group meetings have been organized, one in Asia and the other in the Pacific, to identify and synthesize 24 regional cooperation activities. Out of these, eight have been developed into full-fledged project documents and funding support has been secured. The remaining project profiles have been streamlined and consolidated and submitted to potential donors for their consideration. Recently, a multi-year multidisciplinary mega-project for studies of advanced satellite data applications for environmental and natural resource management has been launched. Twenty technical teams from 15 member countries of ESCAP participated in this exercise.

A considerable number of workshops and seminars have been organized to transfer knowledge and technology. Among these were a workshop on remote sensing for land and marine resources environmental management; training workshops on tropical ecosystem management; an expert group meeting on GIS standards and standardization procedures; and a working group on information services. A high-level seminar on the integrated use of space applications for poverty alleviation and rural development were organized, and among the 70 participants, one third were women. A seminar on geo-information systems for coastal zone management and distance education was also organized. All these activities, which directly contribute to exchange of information and transfer of technology between nearly 1,000 key specialists from some 40 member countries,

have made a tangible impact on national capacity-building.

The promotion of human resources development is another important dimension of RESAP's activities, and in this context, an education and training network in the area of remote sensing and GIS was strengthened following the Ministerial Conference. This network has provided a mechanism for participating countries to share facilities in the region for education and training on a TCDC basis, with ESCAP playing a catalytic role. Through this regional education network, RESAP provides travel funding on an annual basis to some ten long-term fellowship students from developing countries who are members of ESCAP to enable them to study in China, India and Indonesia.

Following the Ministerial Conference, ESCAP accelerated its efforts to enhance the regional information service on space applications. Its network produced a questionnaire and prepared an inventory on space technology capabilities in the region. The network continues to publish and distribute the biannual *Asian-Pacific Remote Sensing and GIS Journal*, and the quarterly publication, *Space Technology Applications Newsletter*. In addition, over a dozen technical proceedings and manuals/guidelines have been produced since the Ministerial Conference took place.

Another important dimension is the study on computerized regional spatial information networking through cyberspace. Following a prefeasibility study, a feasibility study was concluded in 1996 and ESCAP is in the throes of establishing an Earth Space Information Network based on the existing regional information infrastructure and availability of data sets to promote information-sharing for environmental management.

Through the implementation of the Regional Space Application Programme, over the last two-and-a-half years the ESCAP region, at both the national and regional levels and with strong donor and government support, has experienced a quantum leap in space technology development and applications. At the regional level, the progress achieved has been translated into the Strategy and Action Plan. The activities range from national policies and strategy formulation, programming and planning, to institutional restructuring. Example of such activities include the passing of a legislative bill in the Philippines to promote the modernization of natural resources and environmental management using space technology. New long-term national space programmes have been launched by the Government of the Republic of Korea, as well as the integration of space technology for sustainable development planning in national agenda 21. The region now has 30 remote sensing programmes or centres with hundreds of thousands of remote sensing specialists working on several thousand natural resources and environmental management projects.

There are more than 1,000 GIS installations in various sectors, including government planning offices. Three regional members have developed comprehensive end-to-end space programmes, and nine members have embarked upon small satellite programmes directed towards environmental and natural resource management. Eleven remote sensing ground receiving stations are operating in parallel with over 30 meteorological satellite ground receiving stations for the operational acquisition of environmental data, and the region can access some 20 communication satellites providing several hundred transponders.

As an acceptable space information structure emerges in the region, the most challenging task is how to harness space technology applications for sustainable development. It is obvious that on-going efforts are required at both the national and regional levels. Issues and priorities may vary from country to country at the national level, and governments should refocus their action strategies to address issues relevant to the integration of space technology applications with development planning. UNISPACE III will provide an excellent opportunity for the ESCAP region to further benefit from developments in global space technology.

In conclusion, ESCAP welcomes the decision of the Committee to hold UNISPACE III. The Conference will not only help boost the development and applications of space technology worldwide, but will also create an environment conducive to regional cooperation and will impact favourably on national space development programmes. ESCAP is ready to work closely with COPUOS in the preparatory work for UNISPACE III. In this connection, I am pleased to inform the Committee that ESCAP has already directed its Secretariat to begin preparations for the organization of the Second Ministerial Conference on Space Applications for Development in Asia and the Pacific, as a follow up to UNISPACE III.

The CHAIRMAN: Thank you for your statement and for your warm words addressed to the new Bureau. Are there any other delegations wishing to speak under this agenda item? I see none. Since we have some time left, we will commence our discussion on agenda item 6.

Ways and means of maintaining outer space for peaceful purposes

The CHAIRMAN: As we do not have any speakers on the list, I would like to ask delegations if anyone wishes to speak under this agenda item? Since there are not speakers at this time, we will reconvene tomorrow morning to continue our discussions.

As I announced earlier, upon conclusion of agenda item 5, "General exchange of views", we will continue our consideration of agenda item 6, "Ways and means of maintaining outer space for peaceful purposes". I urge all delegations wishing to speak on this agenda item to inscribe their names on the list of speakers with the Secretariat as soon as possible. Time permitting, we may also begin our joint considerations of agenda items 7 and 9, "Report of the Scientific and Technical Subcommittee" and "Implementation of the recommendations of UNISPACE 82".

Before adjourning, I understand the representative of India would like to make an announcement.

Mr. G. NAIR (India): I have a brief announcement to make. The Ambassador of India invites the heads of delegations and participants in the fortieth session of COPUOS to a reception in honour of Professor Rao, Chairman of COPUOS, and the new Bureau members. This will take place in the restaurant of the VIC from 6 p.m. to 7.30 p.m., and you are cordially invited to attend.

The CHAIRMAN: Thank you for your announcement. I now give the floor to the representative of Germany.

Mr. G. FULDA (Germany): In order to make optimum use of conference facilities, I wonder if you would consider asking delegations if anyone might be prepared to speak under agenda item 7 now.

The CHAIRMAN: I will ask Dr. Jasentuliyana to reply to your question.

Mr. N. JASENTULIYANA (Director, Office for Outer Space Affairs; Deputy Director-General, United Nations Office at Vienna): If you wish, you may take speakers on agenda item 7. However, as you know, this item is usually introduced by the Expert on Space Applications and it was our intention to introduce this item tomorrow. If the distinguished representative of Germany wishes to speak at this time, then he is free to do so.

The CHAIRMAN: Does the representative of Germany wish to speak on agenda item 7, or in accordance with our usual practice, as suggested by Dr. Jasentuliyana, would it be preferable to open discussion on this item with the statement by the Expert on Space Applications?

Mr. G. FULDA (Germany): I am in your hands; if the list of speakers under agenda item 7 is open, then I would volunteer. Otherwise I feel we should perhaps adhere to tradition.

The CHAIRMAN: I think we will follow conventional practice. I do have some comments to make. We have been discussing remote sensing for some time; it is a subject of great interest and importance, and I personally have been trying to promote remote sensing as much as possible. However, there is little on the communications side, and this is something we need to address. We have a large number of communications satellites, including those operated by developing countries, yet the situation vis-à-vis communications is somewhat poor. The next decade is considered to be the decade of personal and mobile communications and broadcasting. It has changed dramatically; today we speak of networking for the provision of multi-media service, voice data messages, etc. This means access to information from anywhere on our planet, over land, air or sea.

One case in point is the V-SAT. Out of the total V-SATs operational today, which number 60,000, 83 per cent of these are in North America, 4 per cent in Latin America, 5 per cent in Asia, and some 7 per cent in Europe. That is the tragedy. As far as penetration into rural areas to provide rural communications and access to the information highway, the obvious road to choose is via personal mobile communication services or the V-SATs. I feel we must begin to consider what can be done to improve the communications infrastructure — without which none of the developing countries will be able to compete in the so-called knowledge-based integrated global economy which we constantly refer to.

I appreciate it is not the Chairman's place to make this kind of statement! But since we are all friends here, I felt I should try and instigate processes so that delegations may put forward their suggestions. I believe that UNISPACE III must address these problems in detail. As there are no further speakers this afternoon, the meeting is adjourned.

The sitting adjourned at 5 p.m.

Committee on the Peaceful Uses of Outer Space

Unedited transcript

436th Meeting
Wednesday, 4 June 1997, 10.10 a.m.
Vienna

Chairman: Mr. RAO (India)

The meeting was called to order at 10.10 a.m.

The CHAIRMAN: I now declare open the 436th meeting of the Committee on the Peaceful Uses of Outer Space.

Before proceeding with the day's agenda, I have some good news for you. I have just been informed that the 97th flight of Ariane lifted off at 01.20 hours Vienna time today, and was successful in placing into orbit the Indian communication satellite INSAT 2D and Inmarsat 3 [and 4?]. I am sure you will all join me in congratulating the delegations of India and Inmarsat on another success, and wish them well for future operations on those satellites which have just been launched.

This morning we will continue and conclude discussion on item 5 of our agenda, "General exchange of views", and we will then begin our consideration of item 6, "Ways and means of maintaining outer space for peaceful purposes". As I announced yesterday, we will also begin our joint consideration of items 7 and 9, "Report of the Scientific and Technical Subcommittee" and "Implementation of the Recommendations of UNISPACE 82, as well as Preparations by the Preparatory Committee for the United Nations Third UNISPACE Conference". I therefore urge delegations wishing to speak on these agenda items to inscribe their names on the list of speakers as soon as possible.

This afternoon, we will continue and conclude our consideration of item 6, and continue our joint consideration of items 7 and 9.

General exchange of views (cont.)

The CHAIRMAN: The first speaker on my list is the distinguished representative of Chile.

Mr. A. CELEDON (Chile) *(interpretation from Spanish)*: Firstly, I would like to congratulate you and the other members of the Bureau on your election to this high post. My delegation is convinced that your skill and ability will lead the Committee towards the inherent requirements of the twenty-first century, where we will witness ever greater expansion in terms of space activities and their development.

My delegation believes that at the two sessions of the Subcommittees held this year, special achievements were made which deserve mention: firstly, the agreement on a provisional agenda for UNISPACE III; and secondly, the inclusion of a new agenda item, "Review of the status of the five international treaties governing outer space". Both of these issues will require further consideration by COPUOS.

As concerns UNISPACE III, this Conference will have outstanding significance for the continuing development of space activities. Therefore the preparations for the Conference must be a priority issue for COPUOS, the Office for Outer Space Affairs and all Member States. The holding of regional preparatory conferences is thus of the utmost significance. That being said, Chile would be happy to host the regional conference for Latin America and the Caribbean and to make every effort to ensure its success. The Government of Chile will formalize this invitation in due course through the appropriate channels.

The inclusion of the new topic on the agenda of the Legal Subcommittee, to which I have already referred, will strengthen that Subcommittee's role. Recent events have shown us the legal requirements which emerge from the many issues which arise in the context of space activities. Chile has suggested that a comparative study of space law and the environment, in particular space debris, would be very useful. As concerns the geostationary orbit, my delegation

appreciates the proposal put forward by Germany to request the ITU to consider the subject of equitable access of satellites to the geostationary orbit. This reflects a more flexible position for subsequent discussion and regulation. The question of space debris should therefore be analysed in depth in the Legal Subcommittee, and should remain on its agenda.

My delegation reiterates that the space-faring nations must vigorously adjust their activities to the doctrine and spirit enshrined in the various treaties. This is especially true as concerns nuclear power sources in outer space. The Liability Convention sets out guidelines and liabilities in this respect and the space-faring nations should adhere to its contents. In this respect, Chile could recently have found itself in a difficult situation which could have had serious consequences. It is therefore imperative that explicit legislation exists to govern this area.

Chile welcomes the initiative of the Governments of Mexico and Brazil to enter into an agreement to set up a regional technology and training centre for Latin America. This is a practical initiative in terms of international cooperation in space activities which we all support.

At the national level, among the various ongoing space activities in our country, a satellite will shortly be launched by the Chilean air forces. This satellite will carry out experimental work which will benefit the region in general. In cooperation with NASA, Chile is involved in the Chagaspace project to specifically target Chagas' Disease, which has devastating effects in rural areas. Chile is already collaborating with the United Nations in terms of airspace law and space law, and we feel that the creation of a space agency could greatly benefit the space community.

The future poses great challenges in all areas of space, be they technological, scientific, legal or ethical in nature. All organizations involved in space affairs must therefore play a responsible role in such developments. In this respect, the work of COPUOS is particularly significant. The conquest of and access to the technology, which is a prerequisite for sustainable development of all people, calls for a concerted effort to be made by all those involved, and we must make the best possible contributions to this effort.

The CHAIRMAN: Thank you for your statement and kind words addressed to the Bureau. As there are no other delegations wishing to speak under this item, we have thus concluded our discussion of this item. We will now start discussion of agenda item 6.

Ways and means of maintaining outer space for peaceful purposes

The CHAIRMAN: The first speaker on my list is the distinguished representative of Mexico.

Mr. V. ARRIAGA (Mexico) *(interpretation from Spanish)*: As concerns this agenda item, my delegation would like to point out that the recent approval of the Chairman's package proposal and the new working methods of the Committee will allow COPUOS to take new initiatives. During recent informal consultations in the Legal Subcommittee, the proposal of my delegation for inclusion of a new topic on the agenda was accepted. Suggestions such as our own are also aimed at maintaining outer space for peaceful purposes in that they aim to strengthen the legal regime applying to outer space.

Another way to promote the peaceful use of outer space is for all countries to adhere to the resolution adopted by the last session of the General Assembly. That contains key elements to enable COPUOS to promote international cooperation. In conclusion, Mexico agrees with other delegations concerning cooperation between this Committee and the Conference on Disarmament. There should be dialogue between these two bodies in order to revitalize activities and to maintain outer space exclusively for peaceful purposes.

The CHAIRMAN: The next speaker is the distinguished representative of the United States.

Mr. K. HODGKINS (United States of America): Before giving my delegation's views on this agenda item, I would like to recall that 1997 marks the thirtieth anniversary of the Outer Space Treaty. This treaty established the principle of freedom of exploration and use of outer space by all States, and created a legal framework to promote international cooperation in space among developed and developing countries.

We are also approaching another milestone: 1998 will be the fortieth anniversary of resolution 1348, submitted by the United States and 19 other States, which established the Ad Hoc Committee on the Peaceful Uses of Outer Space. The resolution marked a significant step forward for the world community by establishing COPUOS as the only standing body of the General Assembly to consider international cooperation

in the peaceful uses of outer space. My delegation continues to believe in the wisdom and validity of the General Assembly's conclusion, when establishing COPUOS, that it be concerned exclusively with promotion of international cooperation in the peaceful uses of outer space. The First Committee of the General Assembly and the Conference on Disarmament are the competent multilateral fora for discussion on the disarmament aspects of outer space.

COPUOS has played a crucial role in advancing space cooperation and provides a unique opportunity for the exchange of information among developed and developing countries on the latest developments in the use and exploration of outer space. Over the past 40 years, the Committee has formulated and adopted five major outer space treaties and several sets of international principles, evolving a new branch of international law at a pace second to none.

At this point, it is worthwhile to reflect on our discussions since first taking up this agenda item on 1985. The formulation of the title of this agenda item was the product of intensive negotiations in 1984 which culminated in the inclusion of the item on our agenda at the thirty-ninth session of the General Assembly. This item marked the restoration of the consensus principle and the beginning of a long and sometimes arduous task of injecting new life into the work of the Committee.

Since then, there has never been any specific agreement regarding the role to be played by COPUOS in this regards. However, despite this lack of agreement, I think it is true to say that this agenda item has produced measurable results in revitalizing COPUOS and its Subcommittees. This has been reflected in the establishment of a working group on the implementation of the recommendations of UNISPACE 82; the addition of new items to the agenda of the Scientific and Technical Subcommittee; the impetus for the final round of negotiations on remote sensing principles; and the addition of the item on spin-offs. All these developments have their origin in this item.

Another indication of the success of our efforts is the increasing relevance of the Committee's work to the international community in general, as reflected by the steady increase over the past few years in the number of other intergovernmental organizations, as well as NGOs, seeking participation in the Committee's work.

On the basis of discussions under this item, the Committee also concluded that strengthening of international cooperation in the peaceful exploration and use of outer space implies a need for the Committee itself to improve, whenever necessary, the methods and form of its work. My delegation hopes that, despite certain political differences on certain issues, all delegations can make progress in this area of our work. It is a vital process that must continue if COPUOS is to function effectively in advocating cooperation in space within the United Nations system.

The reform of the United Nations system has been a priority for the United States and other governments. The record of COPUOS and its Subcommittees as concerns utilization of conference resources was for many years at best marginal, and my delegation had expressed deep concern in this respect. However, the fortieth session of the Committee will usher in a near total reversal of this situation. This is due in large part to a series of reform measures proposed by the United States, Australia, Belgium, Germany, Italy, Japan, the Netherlands and the United Kingdom, in working papers submitted over the past ten years. Many of those measures have now been used as models for similar efforts in other United Nations organs. In fact, the *Committee on Conferences' Report to the 51st United Nations General Assembly* (document A/51/32) and the 1996 *Progress Report of the Efficiency Board to the Secretary-General* cited several examples of where COPUOS is making significant strides towards optimal use of resources.

The benefits of our efforts to reform the methods of work of COPUOS and its Subcommittees are now evident. We are scheduled to meet for five-and-a-half weeks in total per year, rather than seven weeks; at each session we are able to complete our work ahead of time; we have established a working group of the whole to consider working methods; and there has been a reduction in documents produced by the Secretariat.

Based on information provided by the report of the Committee on Conferences and other information provided by the Office for Outer Space Affairs, my delegation's understanding is that due to these reforms, conference servicing costs for COPUOS and its Subcommittees will be reduced from $2.6 million per biennium to $1.5 million. There has been a 12 per cent reduction in documentation produced by the Secretariat, with cost savings of some $916 per page, taking into account translation into all six official languages. If a session ends early, the saving is approximately $14,000 per day in conference costs. This is a record in which both the Committee and the Office for Outer Space Affairs should take great pride.

At the same time, COPUOS has done and will do more with less. Additional agenda items have strengthened the scientific content of COPUOS and moved it away from politically contentious issues, such as disarmament. A set of long overdue principles on the safe use of nuclear power sources in outer space were adopted; agreement was reached to hold UNISPACE III in 1999; workshops and training seminars on space technology and applications for developing countries were expanded; and last year we adopted a United Nations declaration on international space cooperation.

In conclusion, there is no doubt that the utilization of space technology to solve problems on Earth must be considered in a global perspective, particularly as concerns protection of the environmental quality of the land, oceans and atmosphere. Regional cooperation also continues to hold great promise. Perhaps we should dedicate our efforts under this item to exploring how the Committee could use its resources and expertise to take full advantage of the potential for regional cooperation to meet specific regional needs. Ways in which the Committee could promote greater international cooperation in the use of space systems for early disaster warning, mitigation, and global search and rescue activities could also be considered.

The CHAIRMAN: The next speaker on my list is the distinguished representative of the Czech Republic.

Mr. L. PEREK (Czech Republic): Under the general exchange of views, I said that this Committee is the focal point for peaceful space activities. As such it should receive information from other bodies dealing with the same subject, and to date COPUOS receives no information from the Conference on Disarmament, which is or might be concerned with satellites engaged in peaceful activities.

To cite some examples of this latter point, in July 1989 France made a proposal to establish an international trajectography centre (UNITRACE), possibly as part of the United Nations Secretariat. The centre's main role would of to study trajectories of objects in Earth orbit. Membership would be open to all States possessing or using satellites, and its aim would be to increase confidence of States in the peaceful uses of outer space. The centre would have no regulatory functions but would collect data for updating space object registration, monitor orbits of space objects, and make real-time calculations of trajectories of space objects.

In carrying out these functions, the centre would be able to warn parties of potential intersecting trajectories, or of space objects passing very closely within one another. There would therefore be some overlap with the issue of space debris.

Another proposal concerned the establishment of "keep-out zones". These take the form of spherical zones which move with satellites in outer space itself. A first approach, known as a proximity zone, would aim at delimitation of the location of each object. A second sphere, the so-called wider approach zone, would establish an obligation of notification for passage through it, and an obligation of satellites engaged in peaceful activities would also apply.

A broader proposal is to establish "Rules of the road" – forming a code of conduct for space. These rules would be aimed at improving the safety and predictability of outer space applications, reducing the danger of accidents, and providing information about the origin of space objects. These rules would also have to apply to satellites engaged in peaceful activities. It might be possible to ask the Secretariat to provide us with such information in the future.

The CHAIRMAN: The next speaker on my list is the distinguished representative of China.

Mr. HUANG Huikang (China) *(interpretation from Chinese)*: In recent years, this Committee has done much work and made good progress on maintaining outer space for peaceful purposes. The drafting of the declaration on international cooperation bears witness to this, and we welcome the adoption of the declaration by the General Assembly at its fifty-first session.

As the international situation continues to develop, and the prospect of an arms race in outer space seems ever less likely, my delegation believes that, bearing in mind that the prevention of militarization of outer space continues to be a question of concern to the international community, COPUOS should shift its focus towards how to use space science and technology to better serve the peaceful purposes for the benefit and in the interests of mankind. An important issue in this respect is how to promote international cooperation, in particular how to assist developing countries in establishing policies and measures for the development of their national space capabilities so that they may achieve sustainable development and successfully apply space technology.

The declaration on international space cooperation requests all States, particularly those with space capabilities and with programmes for the exploration and use of outer space, to contribute to the promotion and fostering of international cooperation on an equitable and mutually acceptable basis. Special attention should be paid to the benefit for and interests of developing countries, and countries beginning to initiate space programmes thanks to such international cooperation should work with those countries who have more advanced space capabilities.

UNISPACE 82 recommended the free exchange of scientific and technical information, as well as transfer of technology, in order to promote the application and development of space technology in developing countries. My delegation believes that COPUOS, through the work of its two Subcommittees, can play an active role in this process.

My Government strongly supports all efforts aimed at the peaceful uses of outer space, and is opposed to the use of space technology for non-peaceful purposes. We urge States to intensify their efforts in the area of international cooperation in the peaceful uses of outer space, and for the United Nations to play a stronger role in the elaboration of international law governing space activities. Likewise, organizations within the United Nations should ensure on-going and effective consultations and coordination so that the limited resources available within the United Nations system for space activities can be optimally utilized. My delegation looks forward to working with all members of COPUOS in order to achieve these goals in the future.

The CHAIRMAN: I now give the floor to the distinguished representative of Pakistan.

Mr. M. SHAH (Pakistan): At previous sessions of this Committee, my delegation has pointed out on several occasions that the question of ways and means of maintaining outer space for peaceful purposes falls within the purview of COPUOS. A number of proposals have been submitted to the General Assembly and COPUOS on possible institutional arrangements which could be put in place to monitor and verify an agreement on outer space. This bears witness to the eagerness of mankind to maintain outer space for peaceful purposes only.

My delegation again stresses that this Committee should evolve certain terms of reference to initiate a constructive discussion on the various issues involved. Lack of any major progress on this item for several years, despite repeated requests from the General Assembly through its resolutions, does not give a good impression of the work in this Committee. We hope we will now be able to achieve some constructive and productive work to address this important subject.

The CHAIRMAN: Are there any delegations wishing to speak under this agenda item at this point in time? I see none. As we have sufficient time remaining this morning, and in accordance with our flexible work programme, I would therefore like to begin our joint consideration of agenda items 7 and 9.

Report of the Scientific and Technical Subcommittee on the work of its thirty-fourth session

Implementation of the recommendations of UNISPACE 82; Preparations by the Preparatory Committee for the United Nations Third UNISPACE Conference

The CHAIRMAN: Before turning to the first speaker on my list under these items, I would like to request the Expert on Space Applications to brief delegates on the activities of the Programme on Space Applications.

Mr. A. ABIODUN (Expert on Space Applications, Office for Outer Space Affairs): Thank you for giving me this opportunity to address the distinguished delegates of this Committee concerning the activities of the United Nations Programme on Space Applications under the joint consideration of agenda items 7 and 9.

Before doing so, I would like to join other delegates who have already spoken to note with pleasure that the leadership baton of COPUOS has now been passed to three eminent and distinguished individuals who are very knowledgeable in the field of space: Professor Rao, Ambassador González and Professor Kabbaj. The progress of this Committee will continue under your leadership, and my colleagues join with me in congratulating you all. Your support for the Programme on Space Applications will enjoy a new momentum thanks to your new roles as leaders of this Committee.

I also wish to personally express my deep gratitude to Ambassador Hohenfellner for the outstanding leadership he has provided to this Committee for the last six years, and for the smooth transition he engineered for the new Bureau. My colleagues join with me in paying him a well-deserved tribute, and we reiterate our sincere appreciation of his staunch support,

as well as that of Austria, for the Programme on Space Applications.

I would now like to focus on the Programme itself. Within the framework of its mandate, with which you are all familiar, the United Nations Programme on Space Applications continues to be an effective instrument in many areas. It serves to promote and enhance the understanding of space science and technology, through knowledge and skill development, particularly in the developing countries. It also promotes cooperation among Member States and supports their contributions to continuing developments in space technologies, and assists these same Member States in utilizing this technology to contribute to the solution of social, economic and environmental problems at the national, regional and global levels.

Bearing the above in mind, understanding our planet is one of our main concerns and one for which space technology provides a unique and pivotal tool. How the citizens of the world, particularly those from the developing countries, can attain the necessary knowledge and skills in this field is one of the major preoccupations of the Programme on Space Applications.

The programme accordingly organizes three sets of activities to develop and enhance indigenous capability at the local level. These include: (i) administration of long-term fellowships; (ii) organization of training courses, workshops and conferences; and (iii) establishment of centres for space science and technology education. The skills and knowledge gained through these processes should facilitate the utilization of this technology in many aspects of daily life, such as food security, environmental management, land use, urban planning, forest mapping, identification of vegetation characteristics, including those associated with drugs, disaster warning and mitigation, transportation and communications – to name but a few.

Specifically, the long-term fellowships currently being administered by the Programme are offered by the European Space Agency. There are five of these awards, for studies in communication systems, space antenna propagation, remote sensing information and remote sensing instrumentation. The status of these studies is shown in Annex II of my current report (document A/AC.105/660).

I am also pleased to report that the fellowships initiated by the Programme in Brazil in 1985, at the Instituto Nacional de Pesquisas Espacias (INPE) have fully matured; today these fellowships are co-sponsored financially by the United Nations University, and their operation is now managed by these two institutions. The ten annual fellowships from the Government of Brazil are for studies in remote sensing, with emphasis on research and applications for participants, particularly those from the Latin American subregion. A number of graduates from this fellowship programme are present today.

The Programme continues to address the issue of human resources development at the local level through training courses, workshops, conferences and symposia organized in 1996 as well as earlier this year. Specifically, the Programme focused on the following activities: practical use of satellite radar imagery; development of knowledge and skills of educators in remote sensing; research and education in basic space science; use of space technology to combat natural disasters; development and design of payloads for experimental and small satellites; and spin-off benefits of space exploration and space technology for sustainable development.

At the apex of the Programme's efforts to develop and enhance indigenous capability at the local level is the establishment of regional centres for space science and technology education affiliated to the United Nations. Today, the Centre in the Asia-Pacific region (located in India) is conducting its second nine-month course, with emphasis on communications technology. The third course at this Centre starts on 1 October this year, focusing on remote sensing and geographical information systems.

On 11 March 1997, Brazil and Mexico signed the Agreement establishing the Latin American and Caribbean centre, which will be inaugurated in the latter part of this year. In Africa, Morocco and Nigeria have circulated draft agreements to govern the operation of the respective francophone and anglophone centres in the region, and these too should be inaugurated later this year. Negotiations are under way with and among interested parties concerning the establishment of the Middle East centre.

A technical study mission is planned for the second half of 1997 on the establishment of a network of space science and technology education and research institutions for Central and South-East Europe. This mission will focus on the technical requirements, design, operating mechanism and funding of this network.

In order to point these centres in the right direction, we have prepared and published a set of

curricula, contained in document A/AC.105/649. This document underwent a detailed and elaborate review before its publication, and originally evolved from an expert meeting hosted two years ago by the Government of Spain. We are both delighted and encouraged that the initiative of the United Nations to establish these centres has resulted in the local development and introduction of space science and technology education programmes in many universities around the world. I recently gave a briefing to the International Geosphere-Biosphere Programme (IGBP) on the activities and curricula of these centres; the IGBP is studying the possibility of establishing a relationship between its regional training institutions, whose main activity is global change research, and these United Nations affiliated regional centres for space science and technology education.

The Programme is equally concerned with communication for development. To be connected at the local, regional and global level is an indispensable requirement for development activities in any country. Adequate information is a major prerequisite for acquisition of knowledge in any field of human endeavour. Thus today the Programme provides specific technical advisory services on this vitally important aspect of nation-building, amongst which are the following.

Firstly, the Asia-Pacific Satellite Communications Council (APSCC) which was established and inaugurated in Seoul, Korea in October 1994, with the support of the Programme on Space Applications, continued to make progress in the region. Its 1996 conference placed special emphasis on the contribution of satellite/hale technology to the global information infrastructure. The growing recognition of APSCC since its inception has resulted in its wide international membership, which now numbers 60.

Secondly, at the request of the African countries, a satellite-based information project initiated under the auspices of the Programme is being developed to improve the collection, transmission, distribution and exchange of information specifically in such areas as health care, agricultural research and development, management of natural resources and the environment, and education and science technology within and among African countries, as well as with the international community. A brief summary of the COPINE system is contained in Annex III (pages 15 to 18) of my report.

The COPINE final project document was developed at two working meetings organized in Pretoria, South Africa (25-27 September 1996) and Windhoek, Namibia (19-23 May 1997). This document will be reviewed by the COPINE Provisional Governing Board when it meets next month in Helsinki. At this meeting, it is anticipated that the Governing Board will endorse the final document, and plan the next stage in the implementation of this project, including raising the necessary funding for it. The COPINE project could be replicated in other regions of the world and could provide a significant support mechanism for the data management unit in each of the regional centres for space science and technology education.

Saving lives and property is another major concern of the Programme. In response to the General Assembly's call for the provision of early warning systems of impending natural and similar disasters. As part of its contribution to the IDNDR activities, the Programme has invited interested United Nations agencies to contribute to the development of a project proposal to implement a satellite-based communications network for rural, remote and outer communities of Small Island Developing States (SIDS). This network could thus provide them with a warning system for sudden natural disasters.

A presentation of a modified proposal, oriented towards implementation in the ESCAP region, was made at the ACC meeting held in Vienna in May 1997. Both Inmarsat and WorldSpace are currently evaluating this proposal.

The Programme is focusing attention on the establishment of a technological base in the developing countries. In addition to the Programme's effort to assist Member States to develop appropriate human resources at the local level, and to establish programmes to bridge the communication gap between them, the Programme is targeting the development of technological infrastructure at the local level. We are also concentrating on bringing space technology benefits to Earth in the twenty-first century, through industrial and commercial activities which affect daily life.

The developing countries are seeking opportunities to participate in the various technologies being developed for space exploration and utilization. Such opportunities will enable those participating private industries in both the industrialized and the developing countries to collaborate in areas of mutual interest. Accordingly, the programme is providing opportunities for interaction among industrialists interested in spin-off benefits of space exploration, as well as in the development, design and utilization of small satellites to meet their needs. The latter is particularly relevant to the

exchange of information on remote sensing, health care and education, and early warning disaster mechanisms.

As far as space information is concerned, the eighth document in the series of papers on the Programme's activities is entitled *Seminars of the United Nations Programme on Space Applications* (document A/AC.106/650). The third edition of the directory *Education, Training, Research and Fellowship Opportunities in Space Science and Technology* has also been issued (document A/AC.105/671), and can be found on the Office's World Wide Web.

To ensure that both Member States and the general public can be kept up to date on the latest development in the Programme, the home page for the Programme has been set up on Internet, under the home page of the Office for Outer Space Affairs. The address for the home page, which is accessible on the World Wide Web, is http:\www.un.or.at/OOSA_kiosk/ and contains information on activities which have been implemented, as well as reports and press releases issued in the context of the Programme. Schedules, objectives and the programme of planned activities and projects can also be found on the home page.

I would like to take this opportunity to mention some of the highlights of the Programme. As you know, heavy cloud cover is one of the major problems encountered in surveying Earth from space, particularly in the developing countries. This problem is being addressed with the aid of microwave remote sensing using radar systems that can penetrate clouds and rain, and able to function day or night. Last year a workshop was organized in Manila on this very subject, and we intend to give it greater prominence during the preparatory meetings for UNISPACE III.

The Programme is fully committed to offering assistance to developing countries in helping to combat natural disasters. In this connection we are pleased to note that a major outcome of the Workshop on Space Technology for Prevention and Mitigation of the Effects of Disasters (Santiago, July 1996) was the signing, by the representative of Spain and 12 Latin American countries, of the Inter-American Declaration on Joint Activities for Integrated Development of Civil Protection and Defence, with emphasis on the use of space technology to combat natural disasters.

Through the efforts of the Programme, three Member States have now established space observatories which are being used for space education. Our next activity in the area of basic space science is scheduled to be held in Honduras later this month, and will address elements of education and training in basic space sciences. The outcome of this particu- lar workshop should result in a space education programme for youth, especially in the developing countries.

The Second Regional Conference on Space Technology for Sustainable Development in Africa, held in Pretoria last November, concluded with the *Pretoria Memorandum on Space Technology for Africa*, which included am action plan for translating the elements of the Memorandum into practical programmes (see document A/AC.105/658). The latter will be implemented in 1998 within the framework of the UNISPACE III Preparatory Meeting to be held in Africa. In order to enhance the participation of African Member States in these activities, we have requested each Member State in the region to establish a national focal point for space science and technology for the purposes of liaison with the Programme.

A summary of the activities just described, as well as those planned for the remainder of 1997 and 1998, can be found in my current report. Details of these activities are contained in documents A/AC.105/640, A/AC.105/642-646, A/AC.105/655-658. The greater part of the activities proposed for 1998 will address specific themes of UNISPACE III.

As regards UNISPACE III, the Scientific and Technical Subcommittee, acting as the Advisory Committee for the Preparatory Committee for UNISPACE III, recommended at its last session that the aforementioned preparatory meetings for UNISPACE III should be organized within the scope of the United Nations Programme on Space Applications. The Advisory Committee also indicated that the organization of these preparatory meetings should be carried out in consultation with Member States of each region.

I am pleased to report that these consultations have been carried out, and have extended invitations to Member States to host the regional preparatory meetings. We are delighted to hear that Chile would be happy to host the meeting in Latin America next year. For our part, in extending this invitation, we also gave all Member States concerned an outline of the expected contributions of host countries in support of these preparatory meetings. We are now waiting for responses from other interested Member States to our invitations.

We are in the process of developing a draft process for these preparatory meetings. Such a programme will contain elements of the annotated

provisional agenda for UNISPACE III (see document A/AC.105/673). In addition, the specific characteristics and needs of each geographical region will be reflected in the programme of these meetings.

In support of its 1996 activities, the Programme went to considerable lengths to seek support; in so doing, it received a variety of voluntary contributions both in cash and in kind including the sponsorship of technical and scientific presentations by several experts from the following Member States, governmental and non-governmental entities. These Member States include Austria, Brazil, Chile, China, Germany, Italy, Japan, Pakistan, the Philippines, South Africa, Spain, Sri Lanka, Sweden, United States. The governmental and non-governmental organizations include the United Nations Department for Development Support of Management Services, the Austrian Space Agency, CNES (France), the Committee on Space Research (COSPAR), DARA, ITU, GlobalStar, Inter-American Development Bank, International Centre for Theoretical Physics (Trieste, Italy), International Telecommunications Satellite Organization (Intelsat), Institute of Space and Astronautical Science of Japan, Restec (Japan), and the Planetary Society.

In 1996 the Programme received cash contributions from the Governments of Austria, Pakistan and Spain, as well as from the European Space Agency, the European Commission, EOSAT, IAF, Inmarsat, NASA, NASDA and Nuova Telespazio (Italy). Details of all the above contributions are contained in paragraph 35 (a) to (f) of my current report.

I wish to express the gratitude of the United Nations to all of you, to your respective countries, to the intergovernmental, regional, international and non-governmental organizations, United Nations agencies and regional economic commissions, and to the many enthusiastic and dedicated experts and individuals all over the world for assisting and cooperating with the Programme on Space Applications in achieving its objectives.

As you know, the European Space Agency has been a strong ally of the United Nations in its support of the Programme on Space Applications. Over the years, ESA has been our friend and a true partner as we strive to make an impact on the lives of many around the world, particularly in the developing countries. The United Nations is very grateful to ESA for its continued support, which is channelled through its International Relations Branch. On this occasion, I am particularly delighted to welcome Mr. Giampalmo, who recently succeeded Dr. Arets as Head of the International Relations Branch of ESA. We look forward to working with you and your colleagues and are certain that under your leadership, the relationship between our two organizations will be further strengthened.

I would also like to thank my colleagues in the Space Applications Section of OOSA for their hard work and dedication in the difference phases of the Programme's activities, especially in the face of declining resources and the need to shoulder extra responsibilities. I also wish to thank all my colleagues in the Committee Services and Research Section, as well as Dr. Jasentuliyana, the Director of the Office, for the assistance and cooperation in the Programme's activities.

The financial difficulties encountered by the Programme are well known to you all. In the current biennium, the Programme's budget was cut by one third: that is, by some $150,000. Despite this, demands are being made of the Programme to address issues that affect human conditions on our planet — food security, adequate health care, education, ensuring functional communications systems and information exchange, protection from natural disasters, and ensuring a healthy environment.

In the face of dwindling resources, how the Programme can effectively fulfil its mandate is a major challenge not only for us, but for all countries of the world. I wish to reiterate that the Programme will continue, as it has in the past, to prepare the developing countries to take advantage of the opportunities that should result from their understanding and active participation in the various phases of space technology. If the Programme is to fulfil the mandate you have given it, your genuine support and that of the countries you all represent here are crucial to its future and its continuing effectiveness.

As we approach UNISPACE III, we are all examining what our approach to the future should be. We plan to use the preparatory meetings to stimulate debate on this subject in order that they can be properly defined in time for the holding of the Conference. In the meantime, I am at the disposal of all delegations as concerns their inputs on what such a vision of the Programme for the future should be.

The CHAIRMAN: Thank you very much for your informative and detailed statement on the work carried out by the Programme on Space Applications. We will now continue our consideration of these agenda

items. The first speaker on my list is the distinguished representative of Mexico.

Mr. V. ARRIAGA (Mexico) *(interpretation from Spanish)*: My delegation would like to thank the Expert on Space Applications for his excellent and comprehensive statement. We welcome the progress made concerning the establishment of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean. On 11 March the Governments of Mexico and Brazil did enter into an agreement to that effect. Subsequently, the Senate of Mexico ratified that agreement and are eagerly awaiting the start of these activities.

My delegation in principle favours the United Kingdom proposal, circulated at the last meeting of the Scientific and Technical Subcommittee, on the issue of nuclear power sources in outer space. The programme of work produced by the working group could be examined in order to bring about effective results in generating contributions to step up the use of nuclear power sources in outer space.

In conclusion, my delegation has noted the announcement of the Chilean delegation to host the regional preparatory conference for UNISPACE III, and would like to thank the Government of Chile for their generous offer.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Brazil.

Ms. M. DA SILVA (Brazil): As you know, Brazil and Mexico have already signed the Agreement to establish the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean. The Agreement was signed on 19 April 1997 by the Hon. José Israel Vargas, Minister of Science and Technology of Brazil, and the Hon. José Reyna, the Mexican Ambassador to Brasilia. The Government of Mexico ratified the Agreement last April, and Brazil intends to follow suit in the near future.

The formal setting up of the Centre is in progress, and final administrative arrangements should begin in the second half of this year. As part of the activities which constitute Brazil's contribution to the Brazilian campus of the Centre, the National Institute for Space Research is conducting the eleventh "Remote sensing course for foreign students", for a total of 12 students from Bolivia, Brazil, Colombia, Cuba, Ecuador and Mexico.

The European Space Agency has already informed us that it will be cooperating with the Centre in the near future, in the form of a training course in remote sensing by radar. My delegation is pleased to participate in the Programme on Space Applications, and will do its utmost to ensure that fruitful cooperation is achieved.

The CHAIRMAN: I now give the floor to the distinguished representative of Italy.

Ms. G. VENTURINI (Italy): My delegation appreciates the valuable work carried out and progress achieved on items on its agenda by the Scientific and Technical Subcommittee at its thirty-fourth session.

The issue of space debris merits particular attention and, in accordance with the multi-year plan for consideration of specific matters concerning space debris, the Subcommittee was able to consider modelling of the space debris environment and risk assessment. With some 100,000 pieces of debris in orbit around the Earth, the preservation of the outer space environment is a major concern to the space community. Measure to limit the generation of space debris are seen as a complementary means to ensure the safe utilization of space objects. Agreement between States and international organizations involved in space activities in this area is essential if positive results are to be achieved. My delegation fully supports the work of the Subcommittee towards finalizing its report on space debris.

The wheels are in motion for the convening of UNISPACE III in Vienna in 1999, as a Special Session of the Committee open to all United Nations Members. This Conference will enhance international cooperation in space research and applications, and will provide a global forum for discussion of the problems encountered in space activities.

My delegation has contributed to the activities of the Advisory Committee for UNISPACE III in a spirit of cooperation. However, we wish to emphasize that the cost of holding the Conference should be kept within the existing resources for the Committee and its Secretariat. As recommended by COPUOS at its thirty-ninth session, this could be achieved by reducing duration of sessions of the Committee and its Subcommittees in 1999. My delegation appreciated the statement by the Director of the Office for Outer Space Affairs which explained the efforts being made to this end. We would like to express our appreciation to the Office and the Secretariat for their efficiency and cooperation which, as ever, provides a

solid basis for the work of the Committee and its subsidiary bodies.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Germany.

Mr. G. FULDA (Germany): I would like to express my delegation's deep satisfaction with the progress made in the course of the multi-year workplan on space debris. My delegation participated in this year's discussion on modelling through a presentation on national research in the respective area. We are confident that the Scientific and Technical Subcommittee will prepare and substantive report on space debris, which can then take the form of a status report agreed among States to provide a basis for further deliberations and actions.

Turning to the subject in the forefront of our discussions, UNISPACE III, this Committee will act as the Preparatory Committee for the Conference. We have before us an indicative agenda for the Conference, as contained in the report of the Scientific and Technical Subcommittee. My delegation co-sponsored the working paper (document A/AC.105/C.1/L.209) containing the views of 14 ESA Member States on the venue and agenda for UNISPACE III. In a spirit of cooperation and compromise, my delegation took part in drafting the proposal now contained in the Subcommittee's report, reflecting a synthesis of views expressed in other working papers on the subject. We can accordingly support this proposal. The provisional agenda and preparatory work for the Conference will merit further discussion during the current session of the Committee.

The CHAIRMAN: I now give the floor to the distinguished representative of Pakistan.

Mr. M. SHAH (Pakistan): My delegation would like to make some brief comments on the report of the Scientific and Technical Subcommittee.

Nuclear power sources in outer space is a subject currently being discussed in the Subcommittee through the appropriate working group. My delegation has recommended for some time that a revision should be made of the Principles on the Use of Nuclear Power Sources in Outer Space, adopted by the General Assembly in 1992. In view of rapidly changing technology, safety and risk reduction aspects should be emphasized when revising the Principles. We have also tried to promote the adoption of a constructive debate on the subject, in order to draw up a list of essential points for discussion. A multi-year workplan could possibly be considered in this connection.

My delegation noted with interest the statement of the representative of the International Atomic Energy Agency (IAEA) at the Subcommittee's thirty-fourth session, which recommended an urgent review of the Principles based upon the recommendations of the ICRP, which have been revised since 1992. The IAEA representative recommended the revision in particular of safety principles contained in the United Nations treaties and principles on outer space relating to notification and re-entry with nuclear power sources on board. The principles relating to subsequent assistance to States should also be discussed, as they conflict with the requirements of two IAEA Conventions, namely the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

The IAEA has offered to cooperate with the Office for Outer Space Affairs in formulating draft versions of United Nations treaties and principles on outer space in order to ensure their harmonization with the new basic safety standards in the IAEA Conventions referred to above. My delegation again stresses the need for continuing dialogue on this vital subject and would request all States to continue related studies in order to facilitate discussion of this issue in the Scientific and Technical Subcommittee. We are pleased to note that the Subcommittee has agreed to begin consideration of this subject as from its next session (February 1998).

Regarding space debris, my delegation expresses its appreciation for and satisfaction with the comprehensive technical report prepared by the Scientific and Technical Subcommittee, "Modelling of the space debris environment and risk assessment". This addresses the short- and long-term models, as well as the various aspects of orbital debris risk assessment, in accordance with the multi-year workplan. There is no denying the fact that the pace of progress, as well as the quality of work carried out by the Subcommittee in this specific area, are most commendable. The final report to be prepared in 1999 will go a long way towards understanding the various elements involved in the problem of space debris, risk assessment, and other aspects related to safety of future missions to outer space.

The CHAIRMAN: The next speaker on my list is the distinguished representative of Canada.

Mr. S. LESSARD (Canada) (*interpretation from French*): My delegation does not wish to repeat the position which it expressed at this year's meeting of the Scientific and Technical Subcommittee. We would like

to stress that Canada welcomes the progress achieved on the issue of space debris in accordance with the multi-year workplan. The quality of the research results presented, as well as the promising dialogue which has evolved at both the national and international level, are testimonies of the real progress achieved in maintaining the outer space environment both today and for the future. Canada will continue its work in this important area in collaboration with the international community.

The CHAIRMAN: I now give the floor to the distinguished representative of Austria.

Mr. H. BÖCK (Austria): As my delegation has mentioned on previous occasions, we believe that the United Nations Programme on Space Applications can play a major role in the promotion of the use of space technology for environmental and developmental purposes. It is therefore all the more important to provide this Programme with additional financial resources. Austria has been one of the few countries to regularly contribute to the Programme, and we intend to continue our support. My delegation is pleased to announce Austria's increased contribution for 1997, totalling $25,000. We would like to call on other Member States to follow suit and thus enable the Programme on Space Applications to cope with the numerous tasks ahead.

In 1996 and 1997, the Austrian Ministry for Foreign Affairs and the Office for Outer Space Affairs jointly organized a symposium on "Space technology applications for the benefit of developing countries" in Graz, and an international seminar on "Space futures and human security" in Alpbach, Austria.

The main objective of the symposium, held in Graz from 9 to 12 September 1996, was to promote the potential of space technology for improving social, economic and environmental conditions in developing countries. The overall themes of the symposium were based on Agenda 21, which recognizes that reaching the goal of sustainable development involves making use of space technology. The topics discussed included, inter alia, "Space applications for national and regional development", "Space systems for ocean resource management", "Multinational space programmes", and "Possible future space applications: drug control programmes, land-mine detection and hazardous waste management".

A report containing the observations and conclusions of the symposium is available in document A/AC.105/646. One of the symposium's recommendations was to encourage the organization of a follow-up United Nations/ESA symposium on the theme "Space industry cooperation with the developing world", which will take place in Graz from 8 to 11 September 1997. We are greatly looking forward to this seminar, which will provide an opportunity for representatives from industry and the private sector to interact with international space scientists, space technology experts and policy makers from both developing and industrialized countries.

The international seminar on "Space futures and human security" was held from 27 to 30 January 1997 in Alpbach, and brought together experts and space policy makers from all corners of the world to discuss the role of space technology for the future of human security. I am happy to tell you that our Chairman, Professor Rao, was present at the seminar. The session addressed questions on the issue of space as concerns environmental security, economic security, social security and cultural security. It concluded with an item entitled "Looking ahead", which was intended as a challenge to participants to present their views on the main topics to be included on the agenda of UNISPACE III.

Many of these topics had already been discussed in various United Nations bodies, including COPUOS itself. As discussions are sometimes constrained by formal viewpoints, the format of the seminar was specifically chosen to promote a free and frank exchange of views and perspectives. An information note containing the summaries of the Rapporteur General and the Chairpersons of the seminar can be found in document A/AC.105/C.1/1997/CRP.3. The complete proceedings of the seminar will be published in book form in due course, and a follow-up seminar on "Space futures and human security" will be held in early 1998.

The CHAIRMAN: Thank you for your statement. I would urge all delegates to study the two documents on the proceedings of these seminars, in particular the seminar in Alpbach, whose deliberations took place in an informal atmosphere and which therefore represented a very frank and open discussion. The next speaker on my list is the distinguished representative of the Czech Republic.

Mr. L. PEREK (Czech Republic): As my delegation mentioned in the general debate, we appreciate the technical presentations on space debris made during the last session of the Scientific and Technical Subcommittee. Several models of the population of space debris and its development were presented, and these models originated quite independently from different institutes and countries. General agreement is that we

understand the phenomenon of space debris correctly, at least as regards its general properties. The long-term predictions contained in the technical report cover the next 100 years, and show a steady growth in the debris population. A much longer period of time would be needed to show the natural decline of this population, and this is something which could be usefully included in the technical report, even if the accuracy and reliability of such long-term predictions is less than those in the shorter term.

My delegation welcomes the document on steps taken by space agencies for reducing the growth or damage potential of space debris (document A/AC.105/663). Its importance lies in the fact that mitigation measures and policies used in launch vehicles, as well as in payload, and the prevention of accidental debris creation, are voluntary actions taken by space agencies. As such they can be made operative by the agencies themselves with no undue delay. Various measures taken by different space agencies are very similar, and a system is likely to evolve for mitigation of the hazards of space debris which will be common to all launching agencies. This development is in the interests of the launching agencies themselves as it will raise the life expectancy of active satellites, and in the interests of all users of space applications, as it will increase the probability of continuous service. My delegation hopes that those space agencies who take part in the Inter-Agency Space Debris Coordination Committee (IADC) will continue these activities and develop such ideas further.

The CHAIRMAN: The next speaker on my list is the distinguished representative of the United States.

Ms. S. KAMM (United States of America): My delegation would like to address agenda item 7, the report of the Scientific and Technical Subcommittee. We believe that this year's session of the Subcommittee was very constructive, and its various successes bode well for the future. We greatly appreciate the work of the Chairman, Professor Dietrich Rex, in leading the Subcommittee through an agenda that contains many important and complex issues. My delegation believes that all members of this Committee will agree that continuing budget constraints, increasing global environmental and economic concerns and a growing awareness of the benefits of space activities all point to the need to maintain a productive pace of cooperation in the Subcommittee.

Bearing this in mind, we would like to briefly comment on the progress of the multi-year workplan on space debris, the status of preparations for UNISPACE III, and to give our views on the reconvening of the working group on the use of nuclear power sources in outer space.

This year the Subcommittee completed another productive segment of its multi-year workplan on space debris, addressing the important topics of modelling the debris environment and debris risk assessment. Presentations by several Subcommittee members, the IADC and the ESA demonstrated that a number of space-faring nations are taking important steps to better understand the issue of debris. The United States looks forward to discussion of the third and final topic in the workplan — space debris mitigation measures — which will be taken up at the Subcommittee's 1998 session.

Members of COPUOS have had the opportunity to review the two technical reports of the debris workplan contained in the Subcommittee's reports. These reports not only document the state of technical knowledge on debris, but also clearly indicate that the workplan is achieving its goal of making a significant contribution to our knowledge on space debris. My delegation continues to believe that an adequate technical base of knowledge on this important issue must be established in the Subcommittee before we consider if and when any new legal norms should be discussed in the Legal Subcommittee.

My delegation welcomes the Subcommittee's successful completion of the work entrusted to it by the General Assembly, to provide recommendations on the form, venue, date, participants, agenda and financial aspects of UNISPACE III. The Subcommittee's ability to accomplish so complex and vital a task within the given timeframe was exemplary. The United States particularly welcomed the final agreement on the annotated agenda for the Conference. The development of this agenda involved a high degree of compromise by all members in pursuit of the common goal of a high-quality and technically-oriented special session of the Committee open to all Member States of the United Nations. My delegation is convinced that the major theme of the agenda — Earth observation — will demonstrate the universal benefits of space exploration, research and applications in the best possible manner.

Much still remains to be done to ensure the success of UNISPACE III, and my delegation looks forward to fully participating in this process. As an important first step, the United States has suggested that the Secretariat issue invitations to appropriate commercial companies as well as international, regional, governmental and non-governmental organizations, to

inform them of and request their participation in the Conference.

During the last session of the Subcommittee, my delegation supported the reconvening of its Working Group on the Use of Nuclear Power Sources in Outer Space, and agreed that members be invited to include technical experts in their delegations next year to ensure an informed discussion on all relevant issues. We also believe that revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space is not yet warranted. Until a specific scientific and technical consensus has been reached on international standards relevant to the Principles, it would be inappropriate for the Legal Subcommittee to consider such revision.

The United States space programme recognizes that, as stated in the Principles, for some missions in outer space, it is sometimes both appropriate and essential to use nuclear power sources. The United States implements a rigorous safety analysis and review process prior to any launching of nuclear power sources into outer space, and will continue to apply this approach. We look forward to participating in the Subcommittee's Working Group in order to identify and study further the latest international technical standards relevant to the Principles.

In conclusion, my delegation expresses its special appreciation for the efforts and achievements of the Expert on Space Applications, Dr. Abiodun, and his staff. The impressive record of training courses, seminars and workshop activities, as well as the continuing development of regional centres for space science and technology, is a positive reflection of the time, attention and cooperation given to expanding the opportunities for all countries to benefit from the use of outer space through the Programme on Space Applications.

The CHAIRMAN: Are there any other delegations wishing to speak under this agenda item? I see none. We will therefore shortly adjourn this meeting, but before doing so, I would like to recall the schedule of work for this afternoon, which I outlined in detail at the opening of this morning's meeting. I would urge all delegates wishing to speak to inscribe their names on the list of speakers, so that we are able to conclude our discussions on these items.

If time permits, we will also open discussion on agenda item 8.

The sitting adjourned at 11.45 a.m.